



**2019|20 Year 1**

**Get The Facts Out**

**Faculty Strategy Implementation (FSI) Analysis**



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## About Get the Facts Out

Get the Facts Out (GFO) is a five-year, NSF-funded partnership of the Colorado School of Mines and four national societies: the American Physical Society, the American Chemical Society, the American Association of Physics Teachers, and the Association of Mathematics Teacher Educators. GFO is a unique project designed to reach STEM majors in a large fraction of all U.S. mathematics, chemistry, and physics departments and has the potential to address teacher shortages in these high-need STEM disciplines significantly.

## Repairing the Reputation of the Teaching Profession

To change the conversation around STEM teacher recruitment at institutions across the country, GFO produces research-based content and reports that faculty can use to help improve their teacher recruitment efforts. The resources are designed to celebrate the positives of teaching and to provide students and faculty with facts that address misinformation and common misperceptions about teaching. The GFO Project Team continually works to update and improve these resources as well as provide support to the faculty who use them.

These resources, and all other content in this report, are intended to be used broadly to change the conversation around STEM teaching careers. We encourage anyone to use and distribute these materials for their intended purpose, within the terms of the [Creative Commons license described here](#).



Any opinions, findings, conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation. NSF DUE #1821710 & 1821462.

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## About this Report

The Faculty Strategy Implementation (FSI) survey is appended to the end of the PTaP.HE to ascertain the degree to which GFO materials are used. In order to learn about Professor's responses to the FSI, we administered the survey directly to this group. We are not able to identify Professors individually within the broader responses to the PTaP.HE. We added some specific questions to the survey about gender, department, and whether the professors are tenured or not.

Research questions and statements include:

- How much opportunity do faculty have/seek to influence their students? (Q52-55)
- How do faculty hear about GFO? (Q56-59)
- Faculty usage of and experience with GFO resources
- Modification of GFO materials
- Anticipated future usage or non-usage of GFO resources
- Other impacts of GFO - Is GFO inspiring action/change?

(Free response questions or questions with "other – specify" sections have numbers stating how many times that general answer was mentioned by respondents. Responses with no number next to it means it was only mentioned once)

## Demographics

There were approximately 575 respondents that took part in at least one question of the PTaP.HE survey and the FSI survey. The average amount of responses was around 575 for the earlier questions and decreased to around 30-50 responses per question.

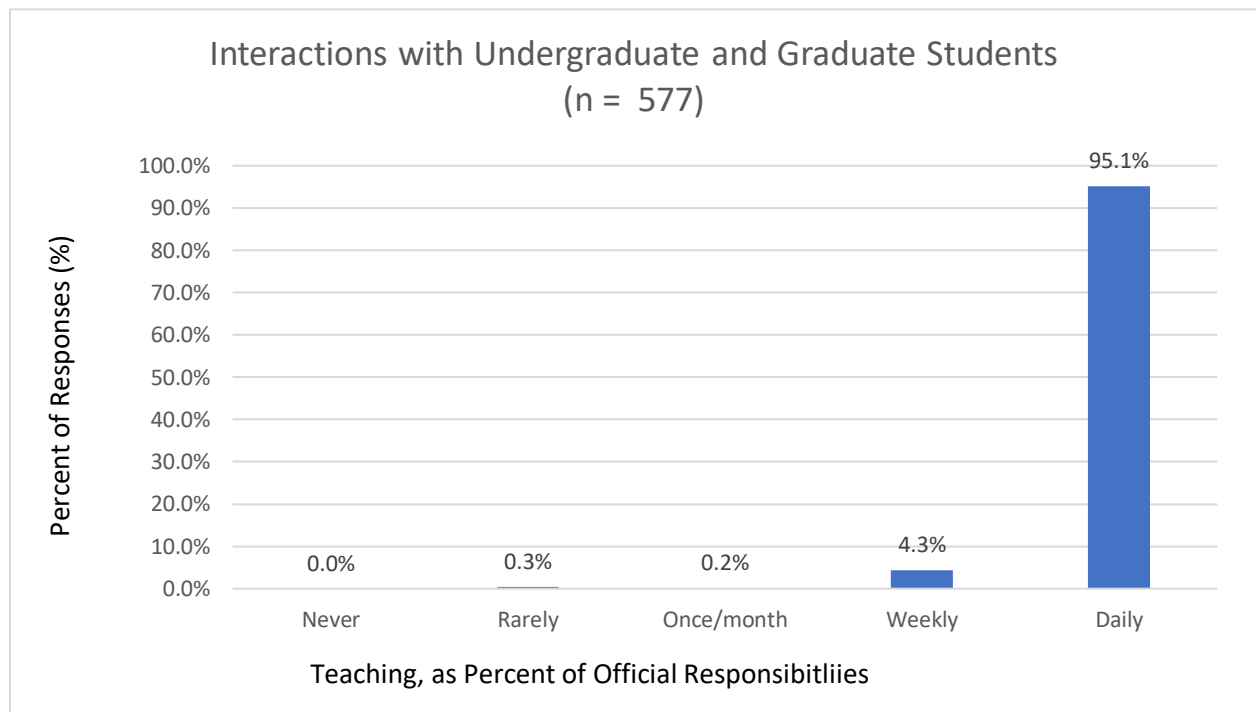
Faculty Gender Information (n = 571)		
Gender	Respondents	Percentage
Male	192	33.6%
Female	348	60.9%
Other	31	5.5%
<b>Total</b>	<b>571</b>	<b>100.0%</b>

Faculty Department Information (n = 575)		
Department	Respondents	Percentage
Math	151	26.3%
Chemistry	158	27.5%
Physics	211	36.7%
Comp. Science	0	0.0%
Engineering	3	0.5%
Biology	27	4.7%
Earth Science	3	0.5%
Other	22	3.8%
<b>Total</b>	<b>575</b>	<b>100.0%</b>

Faculty Tenure Information (n = 573)		
Type	Respondents	Percentage
Tenured/TT	432	75.4%
Non-Tenured	141	24.6%
<b>Total</b>	<b>573</b>	<b>100.0%</b>

## Communication and Conversation between students and faculty

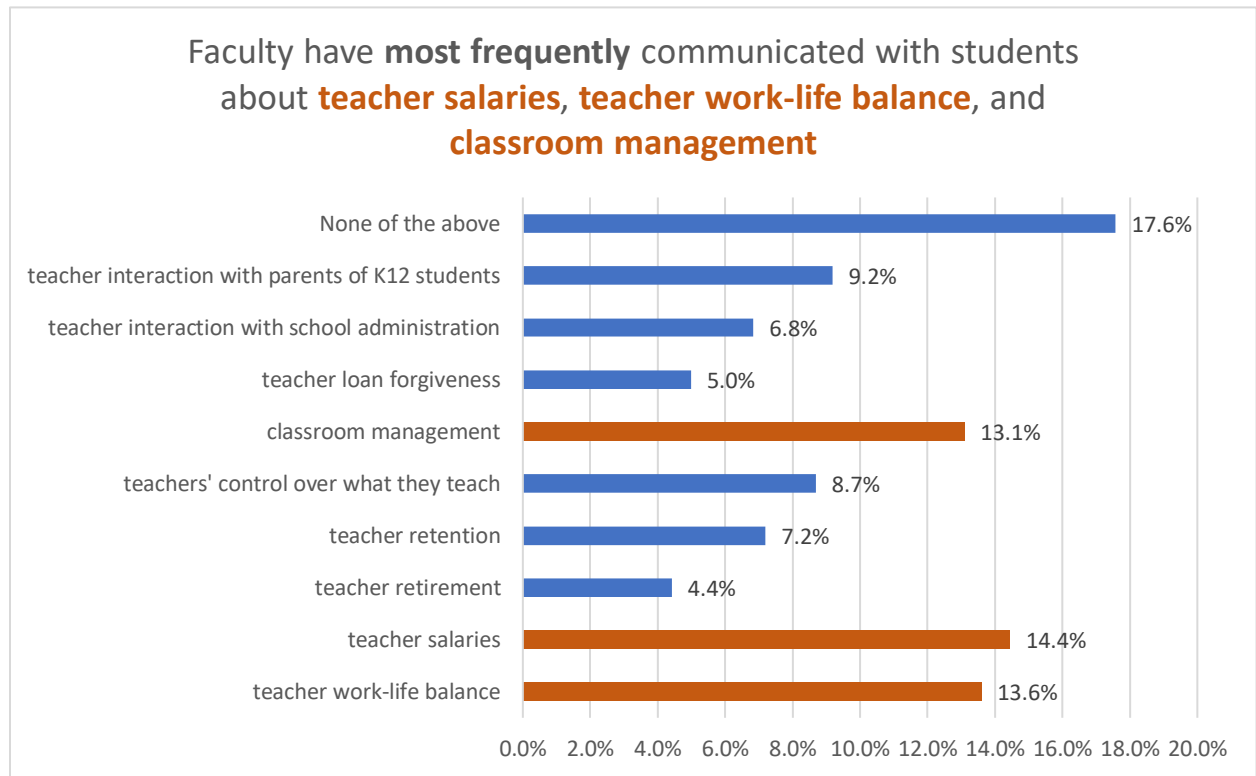
Respondents were asked how often they interact with students in classes, meetings, labs, office hours, or other contexts as part of their university role during a typical year. The majority of respondents interact daily with students, several interact on a weekly basis, and only a few interact once a month/rarely with students.



Respondents were asked if they have had a conversation with a student about grade 7-12 teaching. Around 73% of respondents said yes.

Values	Total (excl. missing for question)	
	575	
	#	%
Yes	418	72.7%
No	157	27.3%
<b>Total</b>	<b>575</b>	<b>100%</b>

Respondents were asked which various topics they have discussed with students within the past year.

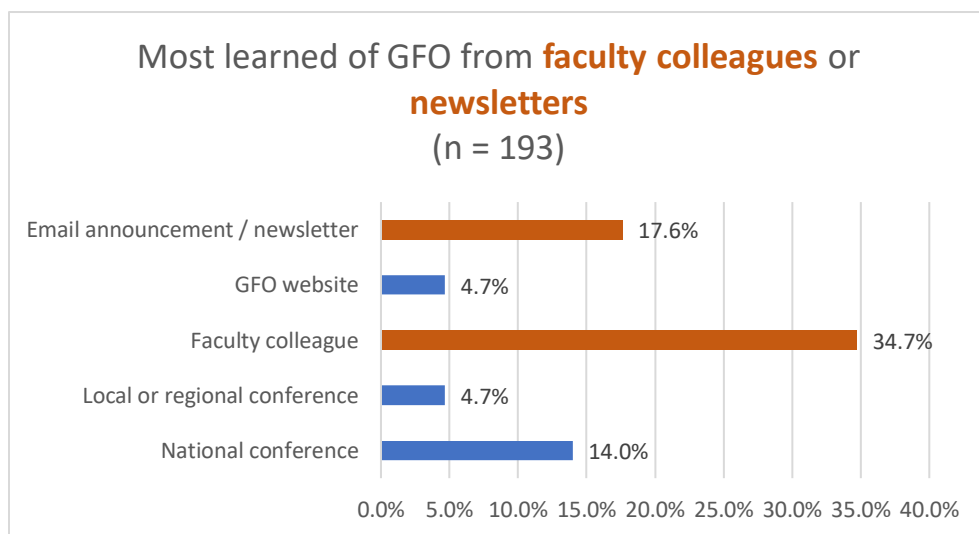


## Have faculty heard of GFO?

We asked respondents if they have heard of GFO and how. A majority of the responses said they have never heard of GFO.

Values	Total (excl. missing for question)	
	578	
	#	%
Yes	136	23.5%
No	442	76.5%
<b>Total</b>	<b>578</b>	<b>100%</b>

Respondents were asked where they have heard of GFO. 34.7% of responses were under “Faculty colleague.”



### Other

- Site visit - **4**
- GFO Survey - **2**
- Don't remember/NA - **2**
- National Inquiry Based Learning and Teaching Conference
- AIP/APS email
- A national, but small summit
- American Chemical Society email communication
- Occasional news releases
- ACS
- PhysTEC



## Usage of and experience with GFO Information

Respondents were asked whether they have used GFO materials or messages. The majority have not.

Values	Total (excl. missing for question)	
	120	
	#	%
Yes	28	23.3%
No	92	76.7%
<b>Total</b>	<b>120</b>	<b>100%</b>

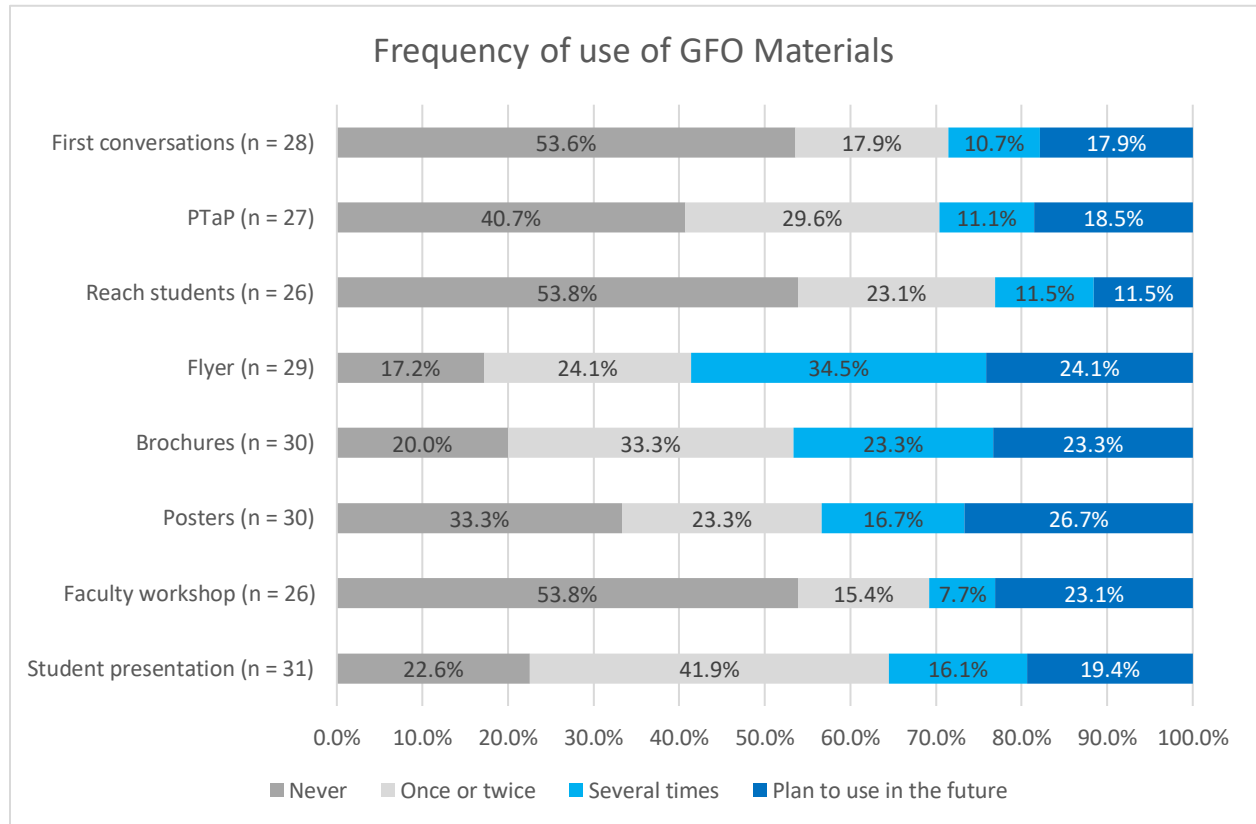
Respondents were asked to briefly describe how they have used GFO resources, materials, or messages and in what context.

- Discussed materials with students and faculty colleagues – 9
- Presented materials in classes/seminar – 9
- Talked about materials in advising meetings – 5
- Handed out/used brochures/posters/flyers – 5
- Have not used GFO materials yet – 4
- Gave workshops – 3
- Used materials for recruitment – 3
- Talked about teacher salaries – 2
- Gave workshops – 3
- Used MythBusters presentation – 2
- Distributed materials at a conference
- Provided materials to UTeach Physics students
- Integrated materials into Noyce Scholarship program

Respondents were asked if there were any other ways GFO materials have influenced them, other than the use of specific materials.

- No/N/A – 4
- Changed perception of grade 7-12 teaching – 3
- Learned more about teacher salary and benefits – 2
- Suggestions for recruitment strategies
- Confirmed commitment to preparing teachers
- Easier to advise students due to the materials
- More proactive about sharing info about shortage of teachers with students/faculty/community
- It got me to do the survey

Respondents were asked how frequently they have used GFO materials including, student presentation, faculty workshop, posters, brochures, flyers, reaching students via various venues, PTaP survey, and first conversations guide.



Respondents were asked why they used those materials in particular?

- Easy to use/access - **5**
- Share up-to-date information with others – **4**
- For recruitment purposes – **4**
- Used for presentations – **2**
- They fit a need – **2**
- They summarize points
- Lowest hanging fruit to getting the information out
- Student-tested
- Usage has been minimal
- At the planning stage to use resources. Not ready for this survey yet

## Experience using GFO Materials

Respondents were asked which materials were most helpful.

- Brochure – 6
- PowerPoint/Presentation – 5
- Flyer – 3
- All have been helpful – 2
- The fact about pensions and geographic mobility seemed to resonate.
- I think we need to do more work to adapt them before they are ready.
- Too soon to say. We have to see how well they work

What challenges were encountered?

- None – 3
- Finding local data – 3
- Hard to convince about “quality of life” – 2
- GFO slides too long/took too much time
- Printing cost
- Had to modify template due to poor resolution
- Not much interest in physics teaching as a career at open house
- Once interactive conversations start, it is sometimes difficult to get the participants to stop talking because they become so passionate about the subject and information.

## Responses about modifying materials

Respondents were asked if they modified any GFO materials. There was a slight majority for respondents that said no.

Values	Total (excl. missing for question)	
	21	
	#	%
Yes	10	47.6%
No	11	52.4%

How did you modify the materials?

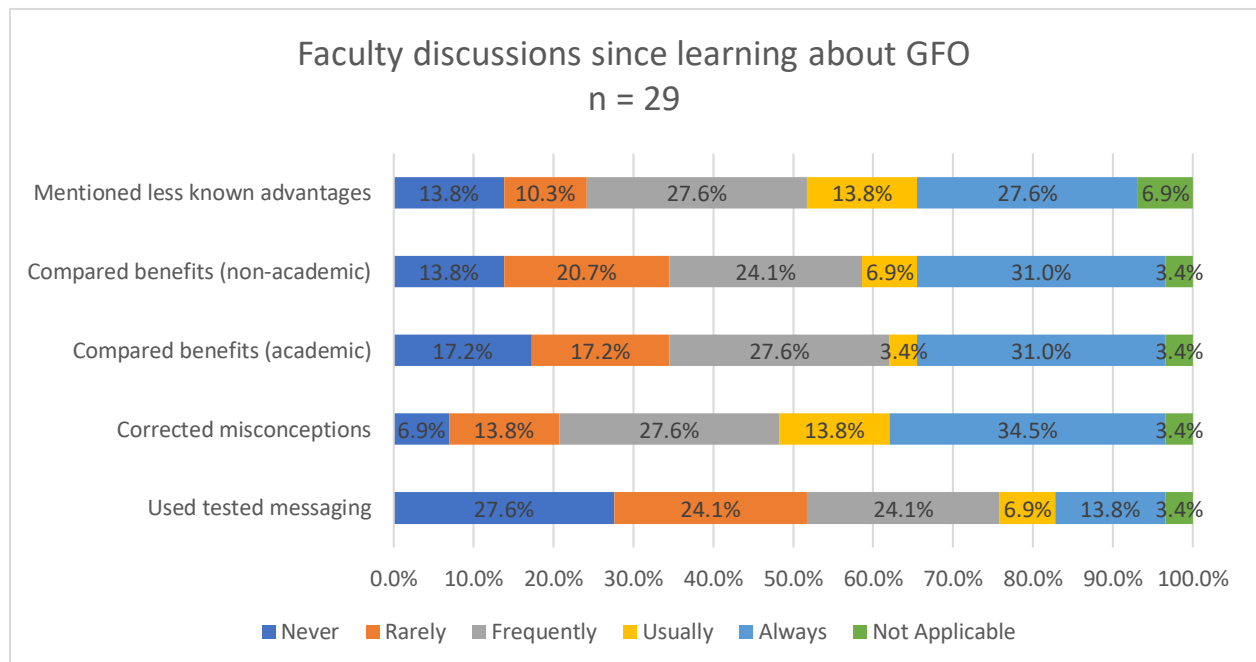
- Local data – **3**
- Added department/university info – **3**
- Eliminated slides
- Modified template due to poor resolution
- Re-created own data tables in PowerPoint

If so, were those modifications helpful?

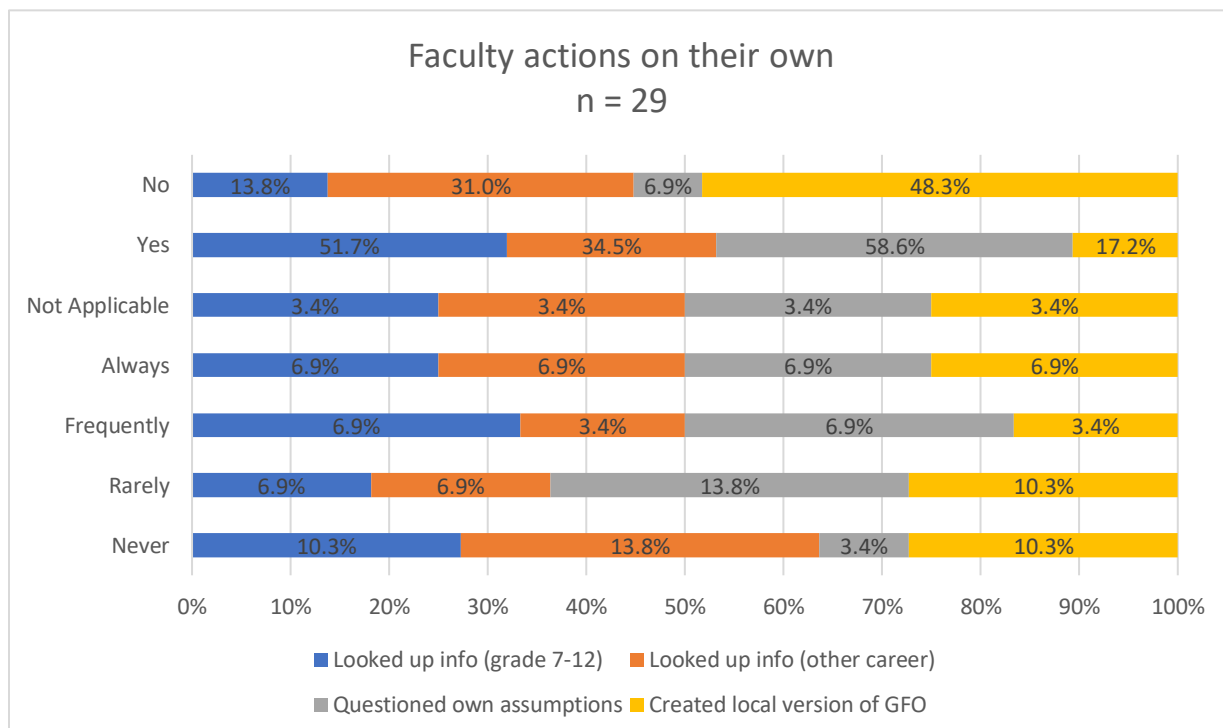
- Too soon to say – **2**
- Local info is good, but more tweaking is needed
- Yes – they are professional looking
- Yes – it would be better to not have to modify them
- Yes – made the material relevant to my individual state

## Responses since learning about GFO

Respondents were asked how often they have done the following options while discussing grade 7-12 with a student or colleague, since learning about GFO



Respondents were asked to indicate if they have done the following various topics on their own since learning about GFO.



Respondents were asked if there were other ways GFO has influenced them, other than the use of specific materials

- No – **17**
- Learning about teacher salaries – **3**
- Encourage more faculty participation – **2**
- Want to learn more – **2**
- Taken this survey before – **2**
- Don't remember much - **2**
- Social Media
- The seminar held at CSU was very helpful
- I am excited that there is an organization promoting STEM 7-12 education and am interested in supporting it.
- Discussions around recruitment and retention of STEM teachers.

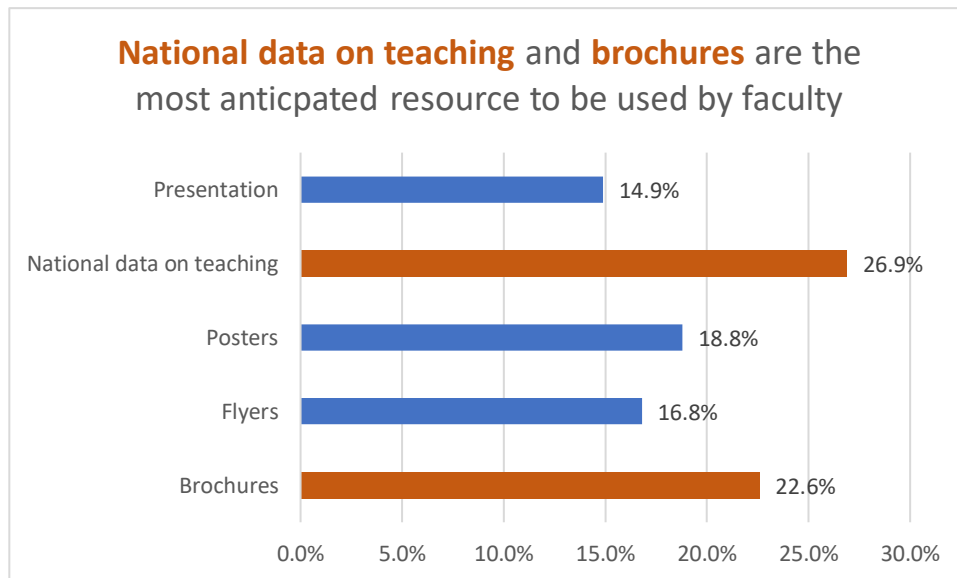
Respondents were asked if they would be interested in using some of the GFO materials or resources on their campus.

Values	Total (excl. missing for question)	
	#	%
	92	
Yes	71	77.2%
No	21	22.8%
<b>Total</b>	<b>92</b>	<b>100%</b>

Respondents were asked the main reason they do not plan to use GFO materials

- I don't have time – **9**
- I don't have an opportunity to use the materials – **4**
- I have other colleagues that are better suited to give out materials - **4**
- I don't feel knowledgeable enough about teacher preparation to use these materials. -**3**
- I am not comfortable encouraging students to become teachers. – **2**
- We do not have a teacher preparation program. – **2**

Respondents were asked which of the following materials and resources they anticipate on using.



Respondents were asked how they anticipate using those materials or resources.

- Advertise materials by posting on office doors/hallways – **16**
- Share with interested students – **15**
- Present materials in class – **12**
- Discussions with students/faculty colleagues – **9**
- Recruitment purposes – **8**
- Advisement purposes – **5**

Respondents were asked why they anticipate using those materials or resources.

- Inform students with correct data/help them learn about teaching - **20**
- Recruitment purposes – **8**
- They are helpful materials/easy to use – **6**
- Advisement purposes – **4**
- Correct misinformation about teachers – **4**
- Need more STEM teachers – **4**
- To encourage students to teach – **3**
- To have discussions with students – **2**
- Advertising NOYCE
- I am a co-director of MSUTeach

## Comments/Suggestions

- Excellent Work!
- Slides probably need updating with the cuts to loan forgiveness program from Trump administration.
- Your question 60 is rather odd. We did create a local version of the brochures and flyers. But you only have to do that once, right? Then you have them. So I chose rarely, because it was only done once. So the phrasing here is odd. That seems more like a yes/no question. And if you've re-examined your own assumptions or perceptions of teaching as a career, how frequently are you supposed to do that? Seems like once or twice is all you would have to do that for it to be effective. So yet again, I chose rarely--because once a month is not frequently. But just a yes/no response is all that is needed here. So the questions you are asking in question 60 do not really line up with the choices you're supplying for possible answers.
- frequently usually etc seems the wrong answer for 60. do it once a year and you are set...
- I just heard of the program a month ago. I will probably do lots of the things you are asking about this summer, but I have not gotten to them yet. Regarding question 62, I would be willing to do an interview eventually, but I have nothing to tell you yet.
- I've only used the presentation. I don't have access to the other materials but would love to have them - and the ability to modify for my institution!